

# Claims

[c1] What is claimed is:

1. An external connection device for placing and connecting a hard disk, the hard disk comprising:
  - a storage media for storing data;
  - a power input port for receiving power; and
  - a first signal I/O port for transmitting signals;the external connection device comprising:
  - a housing having at least one cover and a mesh area and forming a chamber for placing the hard disk, wherein the cover covers the chamber and can be bare-handedly disassembled, and the mesh area has a plurality of meshes that allow air to pass in and out of the chamber;
  - at least one power terminal electrically connected to a power;
  - at least one signal terminal for delivering data recorded in the storage media to an electric device;
  - a power output port electrically connected between the power terminal and the power input port for providing electric energy to the hard disk; and
  - a second signal I/O port electrically connected between the first signal I/O port and the signal terminal, wherein the data recorded in the storage media can be delivered

to the electric device through the second signal I/O port and the signal terminal.

- [c2] 2.The external connection device of claim 1 wherein the housing further comprises a plurality of screw holes for installing a plurality of bare-handedly disassembled screws to fasten the cover.
- [c3] 3.The external connection device of claim 1 wherein the housing is made with metallic material, the housing has six surfaces, and at least two surfaces are composed of the mesh area.
- [c4] 4.The external connection device of claim 1 wherein the power terminal and the signal terminal respectively are a universal serial bus port (USB port), an IEEE 1394 connection port, or a serial advanced technology attachment (serial ATA) connection port.
- [c5] 5.The external connection device of claim 1 further comprising a power switch electrically connected to the power terminal for turning on/off the external connection device, and the power terminal is connected to a power supply for providing extra electric energy to the external connection device.
- [c6] 6.The external connection device of claim 1 further comprising a read-write state indicator placed in the cham-

ber for indicating state of the hard disk, the read–write state indicator comprises at least one illuminant illuminating in accordance with the read–write state of the hard disk and at least one light guide tube for guiding and distributing light of the illuminant.

- [c7] 7.The external connection device of claim 1 further comprising a circuit board in which a logic circuit is formed for controlling signal transmission at the signal terminal and the second signal I/O port.
- [c8] 8.The external connection device of claim 7 wherein the circuit board is placed in the chamber, and the hard disk is above and overlaps the circuit board when the hard disk is installed in the chamber.
- [c9] 9.The external connection device of claim 7 wherein the circuit board is placed at a flank of the chamber, and the hard disk is next to the circuit board when the hard disk is installed in the chamber.
- [c10] 10.The external connection device of claim 1 further comprising a fan for circulating air passing in and out of the chamber.
- [c11] 11.The external connection device of claim 1 further comprising a support for fixing the housing.

- [c12] 12. An external connection device for placing and connecting a storage device, the storage device comprising:  
a storage media for storing data;  
a power input port for receiving power; and  
a first signal I/O port for transmitting signals;  
the external connection device comprising:  
a housing having at least one mesh area and forming a chamber for placing the storage device, wherein the mesh area has a plurality of meshes that allow air to pass in and out of the chamber;  
a power output port electrically connected to the power input port for providing electric energy to the storage device; and  
a second signal I/O port electrically connected to the first signal I/O port, wherein the data recorded in the storage media can be delivered to an electric device.
- [c13] 13. The external connection device of claim 12 wherein the housing further comprises a cover and a plurality of screw holes, the cover is fixed on the housing with a plurality of bare-handedly disassemble screws and the cover can be bare-handedly disassembled from the housing.
- [c14] 14. The external connection device of claim 12 wherein the housing has six surfaces and at least two surfaces are composed of the mesh area.

- [c15] 15.The external connection device of claim 12 wherein the housing is made with metallic material.
- [c16] 16.The external connection device of claim 12 further comprising:
  - at least one power terminal for providing electric energy to the external connection device and making the power output port provide electric energy to the storage device; and
  - at least one signal terminal electrically connected between the second signal I/O port and an electric device for delivering data recorded in the storage media to the electric device.
- [c17] 17.The external connection device of claim 16 wherein the power terminal and the signal terminal respectively are a universal serial bus port (USB port), an IEEE 1394 connection port, or a serial advanced technology attachment (serial ATA) connection port.
- [c18] 18.The external connection device of claim 16 further comprising a power switch electrically connected to the power terminal for turning on/off the external connection device, and the power terminal is connected to a power supply for providing extra electric energy to the external connection device.

- [c19] 19.The external connection device of claim 12 further comprising a read-write state indicator placed in the chamber for indicating state of the hard disk, the read-write state indicator comprises at least one illuminant-illuminating in accordance with the read-write state of the hard disk and at least one light guide tube for guiding and distributing light of the illuminant.
- [c20] 20.The external connection device of claim 12 further comprising a circuit board in which a logic circuit is formed for controlling signal transmitting at the second signal I/O port.
- [c21] 21.The external connection device of claim 20 wherein the circuit board is placed in the chamber and the hard disk is above and overlaps the circuit board when the hard disk is installed in the chamber.